

Directions for use

MACH 130F/130
MACH 130F 22,8V UL
UNIFLEX R96 120V UL



Mach 130F;130 / Uniflex R96 120V UL stand-lamp - one-handed height adjustment
Mach 130F;130 stand-lamp – new type stand
Mach 130F;130F 22,8V UL;130 / Uniflex R96 120V UL wall lamp
Mach 130F;130F 22,8V UL;130 / Uniflex R96 120V UL single ceiling-lamp
Mach 130F;130F 22,8V UL;130 / Uniflex R96 120V UL combined ceiling-lamp

List of contents

1. Safety instructions	Page 3
2. Operating the lamp Mach 130/Uniflex R96 120V UL	Page 4
2.1 ON/OFF switch, light intensity control.....	Page 4
2.2 Positioning	Page 5
2.3 Light field adjustment (focusing).....	Page 5
3. Cleaning	Page 6
3.1 Sterilizable handle	Page 6
3.2 Lamp head, protective disk.....	Page 8
4. Maintenance.....	Page 9
4.1 Adjustments at the ceiling/ wall attachment.....	Page 9
4.2 Adjustments at the stand model	Page 10
4.3 Adjustments at the lamp head	Page 11
4.4 Changing of spare parts	Page 12
4.4.1 Changing the halogen bulbs	Page 12
4.4.2 Changing the fuses (230V; 120V).....	Page 13
4.4.3 Changing the ON/OFF switch (potentiometer) (before 10.2002)	Page 14
4.4.4 Changing the ON/OFF switch (potentiometer) (after 10.2002)	Page 15
4.4.5 Changing the filter disk	Page 16
4.4.6 Changing the protective disk.....	Page 17
4.4.7 Conversion to sterilizable handle	Page 18
5. Data.....	Page 19
5.1 Technical data	Page 19
5.2 Wiring.....	Page 20
5.3 Environmental conditions.....	Page 21
6. Characteristics.....	Page 21
6.1 Specification of bulb.....	Page 22
6.2 Specification of fuse.....	Page 22
6.3 CE-mark.....	Page 22
7. Disposal.....	Page 22
8. Spare parts.....	Page 23
8.1 Mach 130F 230V ceiling/wall/stand model - short arm	Page 23
8.2 Mach 130 230V ceiling/wall/stand model - short arm	Page 24
8.3 Mach 130F/130 120V ceiling/wall/stand model - short arm	Page 25
8.4 Uniflex R96 UL 120V* ceiling/wall/stand model - short arm	Page 25
8.5 Mach 130F 22,8V ceiling/wall model	Page 26
8.6 Mach 130F UL 22,8V ceiling/wall model*	Page 26
8.7 Short arm (stand model).....	Page 26
8.8 SWING (stand model).....	Page 26
8.9 Spare parts list.....	Page 27

* For spare parts of the ceiling and wall attachment see separate instructions for the UL- recognised products.

1. Safety instructions

Please pay attention to the directions for use when handling the lamp.

Attention:

This device is not suitable for use in hazardous locations. The lamp is classified as a Group 1 device according to the Regulations for EEMP.

Repairs to the lamp and special installation work on the reflector or plug-in socket should only be carried out by ourselves or a company expressly authorised by ourselves.

The manufacturer is only responsible for the safety of the lamp if repairs and alterations have been carried out by themselves or a company who can guarantee that the safety regulations have been observed.

The manufacturer is not liable for personal or material damages if the lamp is misappropriately or incorrectly operated or misused.

Make sure that the lamp is in perfect working order before every use.

The lamps Mach 130F/130F 22,8V UL and Uniflex R96 120V UL may not be used without the dielectric filter disk.

The dielectric filter disk between reflector and protective disk prevents a damaging heating of the illuminated area.

The lamps Mach 130 may not be used without the conversion filter.

The lamp body may only be dismantled from swivel arm the (in reverse order to its assembly) after the arm has been secured since the arm is under spring tension.

Installation of Mach 130/130F with electronic transformer 230V

Installing the lamp connect the phase to the ON/OFF switch. The voltage of the neutral line has to be less than low voltage.

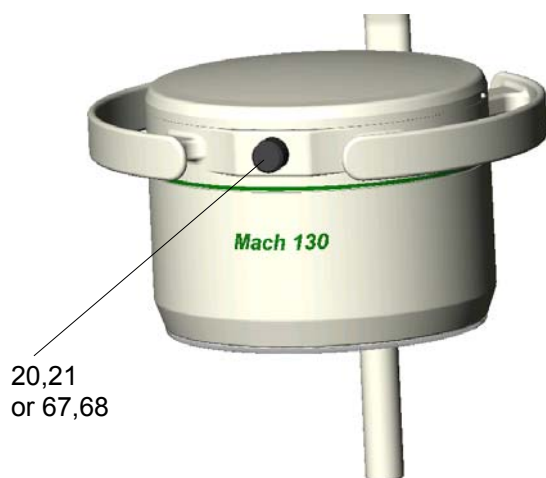
2. Operating the lamp Mach 130/Uniflex R96 120V UL

Features of of Mach 130 / Uniflex lamps:

- Mach 130F with focusable light field size and integrated dielectric filter disk
The reflector is adapted to the dielectric filter disk.
- Mach 130 with fix-focus and integrated conversion filter
The reflector is adapted to the conversion filter.
- Mach 130F 22,8V UL with focusable light field size and integrated dielectric filter disk.
The reflector is adapted to the dielectric filter disk.
- Uniflex R96 120V UL with focusable light field size and integrated dielectric filter disk.
The reflector is adapted to the dielectric filter disk.

The lamp-types mentioned above are available as:

- Mach 130F/130 22,8V / external transformer
- Mach 130F/130 120V / integrated toroid transformer
- Mach 130F/130 230V / integrated electronic transformer and light intensity control
- Uniflex R96 UL 120V / integrated toroid transformer
- Mach 130F UL 22,8V / external transformer



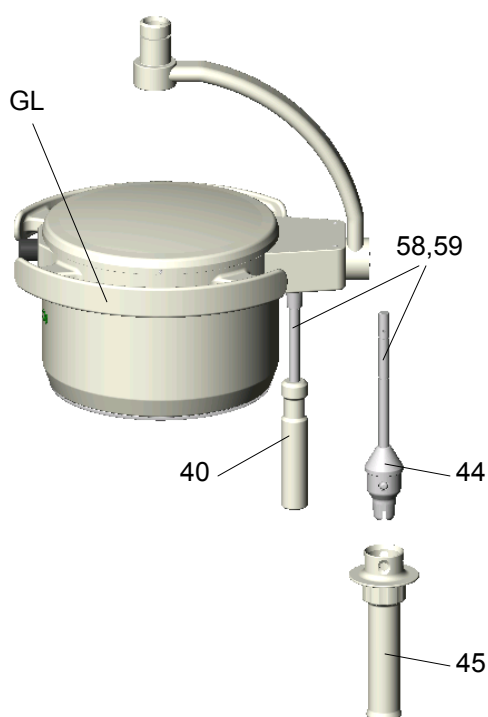
2.1 ON/OFF switch, light intensity control

The push button switch **20/67** switches the lamp on and off.

The lamps with integrated electronic transformer/ 230V offer as an additional facility the function of light intensity control.

To activate the function of light intensity control turn the push-button switch **21/68**.

At lamps with external transformer, in addition to the push-button switch **20/67** a two-pole switch **ON/OFF** must be provided by the customer.

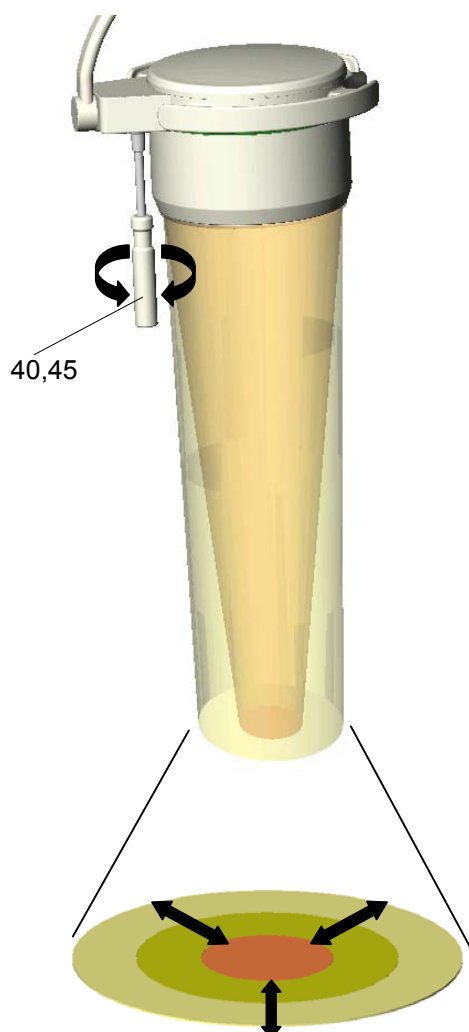


2.2 Positioning

Use the handle **40/45** or the handle rail **GL** to position the lamp.

There are two handle-types available:

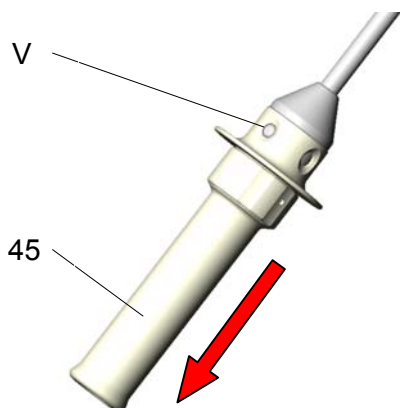
- **Standard handle 40**
The standard handle is fixed to the handle bar **58/59** and can be removed.
- **Sterilizable handle 45**
The sterilizable handle can be removed for sterilisation. It is fixed by the couple **44** to the handle bar **58/59**.



2.3 Light field adjustment (focusing) Mach 130F/130F 22,8V UL/ Uniflex R96 120V UL

The lamp-models Mach 130F/130F 22,8V UL and Uniflex R96 120V UL have a focusing function. That means, you can either enlarge the diameter of the light field or bundle the light to a smaller area, depending on the circumstances.
To activate the function of focusing turn the handle **40/45** (see figure).

3. Cleaning



3.1 Sterilizable handle

The lamps Mach 130/Mach 130F 22,8V UL/Uniflex R96 120V UL can be equipped as an option with a sterilizable handle **45**.

The sterilizable handle **45** is removable and sterilizable. Before using the first time and before every use the handle sleeve must be cleaned, disinfected and sterilised.

The handle sleeve must be removed for sterilisation:

- To remove press the **lock V** and pull off the sterilisable handle sleeve **45** while keeping the lock pressed.
- To attach, push on and slightly twist the handle until the **lock V** engages securely.

Handles often become unsterile during an OP; therefore always keep additional handles available for exchange.

Cleaning / disinfection and sterilisation

Basics

Efficient cleaning / disinfection is an essential requirement for effective sterilisation of the handle.

Within the scope of responsibility for the sterility of the products it should be noted that only sufficiently validated equipment and product specific processes are used for cleaning / disinfection and that the validated parameters are complied with in every cycle.

In addition, the hospital / clinic hygiene regulations must be observed.

Cleaning / disinfection

Cleaning and disinfection must be carried out immediately after use.

A mechanised process (disinfector) should be used for cleaning / disinfection. The efficiency of the process used must be recognised and validated in principle (e.g. listed under disinfectants and disinfection procedures tested and recognised by Robert-Koch-Institute / DGHM).

When using other procedures (e.g. a manual procedure), proof and process efficiency in principle must be provided within the scope of validation.

Proof in principle of the suitability of the handles for efficient cleaning / disinfection was provided using a cyclic cleaning system (Netsch-Bellmed T-600-IUDT/AN, programme 2 for small parts; code B).

It is not allowed to use agents / disinfectants, which contain the following substances, as these may cause changes in the material:

- High-concentration organic and inorganic acids
- Chlorinated hydrocarbons
- 2-ethoxyethanol

When cleaning / disinfecting, the following procedures must be followed:

	Process	Time (sec.)
Zone 1	Pre-rinse, external, cold, 10 – 15°C Washing, acidic, external 35°C Draining time Re-rinse, external approx. 80°C Draining time Re-rinse, external approx. 80°C Draining time	45 120 10 *10 *15 *15 15
Zone 2	Washing, alkaline, external, 93°C Draining time Re-rinse, external, acidic, 90°C Draining time Re-rinse, external 90°C Draining time	135 10 10 15 15 15
Zone 3	Drying, external 100 – 120°C	200
Zone 4	Drying, external 100 – 120°C	200
	Door open / close & transport (sluice discharge)	60
	Cycle time overall ca.	290 ≈ 5 minutes

* When occupying the disinfection zone (washing zone 2), the re-rinse and draining times will depend on the respective objects being washed therein!

Sterilisation

Only previously cleaned and disinfected handles may be sterilised.

The handles are placed in a suitable sterilisation pack (one-way sterilisation pack, e.g. foil / paper sterilisation bags, single or double pack) in accordance with DIN EN 868 / ISO 11607 for steam sterilisation and then sterilised.

Use only the sterilisation procedure listed below for sterilisation. Other sterilisation procedures (e.g. ethylene oxide, formaldehyde and low-temperature plasma sterilisation) are not permissible.

Steam sterilisation procedure

Validated in accordance with DIN EN 554/ISO 11134

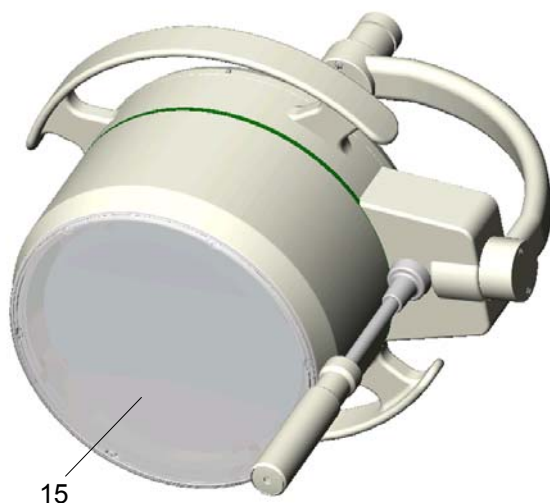
Maximum sterilisation temperature 134°C

Proof in principle of the handles' suitability for effective sterilisation was provided using a fractional vacuum process (Euroselectomat 666 by MMM Münchner Medizin Mechanik GmbH, sterilising temperature 134°C, holding time 7 min.)

Inspection / durability

The handles should be inspected for damage and changed before re-use, if required.

The handles may be cleaned / disinfected, sterilised and re-used for a maximum of 1000 times. If the handles are re-used more than 1000 times, then this will be the responsibility of the hospital / clinic.



3.2 Lamp head, protective disk

The lamp has a high-quality surface, which can be cleaned with conventional cleaning agents.

The protective disk **15** is made of an high-quality plastic. Pay attention to the following during cleaning:

- Wipe over the disk **15** with a wet cloth (never use a dry cloth!).
- Only use disinfectant with less then 20% alcohol.



Alc. \leq 20 %

Wipe the disk **15** after cleaning with an antistatic, non-fluffy cloth.

4. Maintenance

The lamp has been designed and built so that regular maintenance intervals are not necessary. In order to keep the system easy running throughout its life span we recommend that the hinges be greased once a year with an acid-free grease.

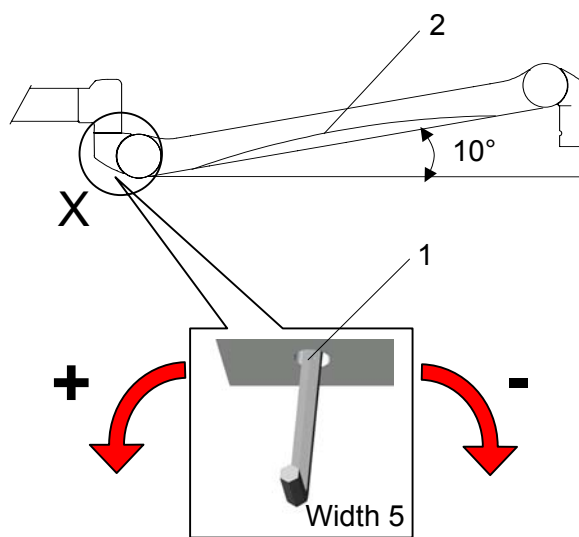
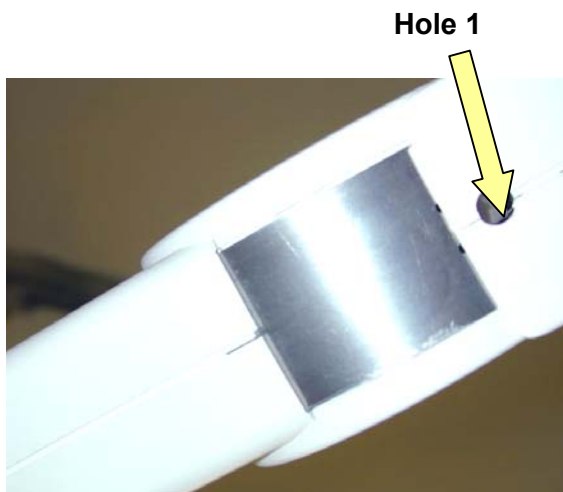
4.1 Adjustments at the ceiling / wall attachment

♦ Adjusting the spring arm

Note:

Maximum additional load at spring arms: Spring arms are equipped with different springs to compensate the lamp / device weight.

To adjust the spring force make sure that the spring arm with the lamp / device can come to rest in any desired position.



- A hole 1 is located at the position marked by detail X.
- Position the spring arm 2 with the lamp / device approximately 10° above horizontal.
- Insert Allan key (width 5, included in the scope of supply) into the hole 1.

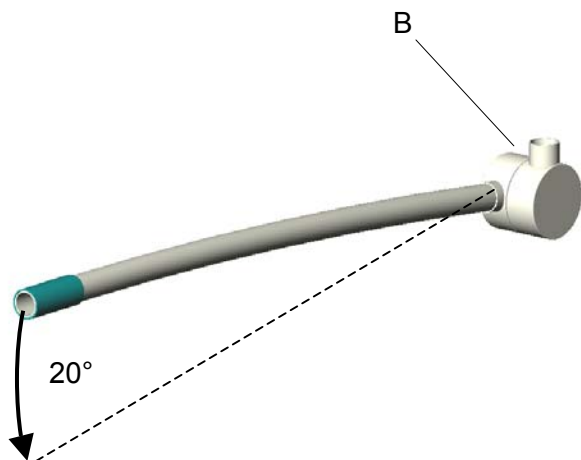
If the spring arm drops, the spring force is too low:

- Rotate the adjustment screw to the **left** (counter clockwise) in the + direction.

If the spring arm rises, the spring force is too high:

- Rotate the adjustment screw to the **right** (clockwise) in the - direction.

If the spring arm with the lamp / device cannot come to rest in any desired position after the spring force has been adjusted, the springs must be replaced by a service technician.



♦ **Adjusting the spring force
(new type ceiling/wall attachment)**

To adjust the spring force proceed as follows:

- a) **The spring arm moves down on its own:**
 - Pull the lamp head approx. 20° downwards until **drilled hole B** lies on the upper side of the joint between spring arm and horizontal arm and a screw is visible in the hole.
 - Insert a slotted screw driver into **drilled hole B**.
 - Turn adjusting screw **to the left** (anticlockwise), the spring force increases.
- b) **The spring arm moves up on its own:**
 - Pull the lamp head approx. 20° downwards until **drilled hole B** lies on the upper side of the joint between spring arm and horizontal arm and a screw is visible in the hole.
 - Insert a slotted screw driver into **drilled hole B**. Turn adjusting screw **to the right** (clockwise), the spring force decreases.

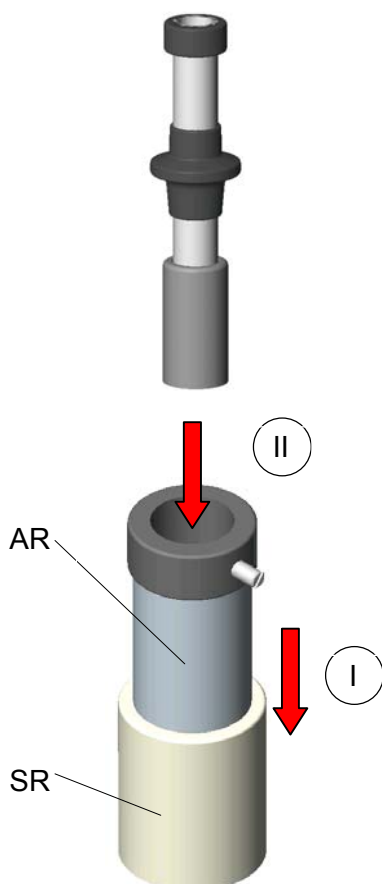
4.2 Adjustments at the stand model

♦ **One handed height adjustment**

It is usually not necessary to adjust the spring force at stands with one-handed height adjustment.

Stand for Mach 120 / 120F, Mach 115 and Makrolux (Ø 13,8mm)

An adjustment of the spring force is not possible.

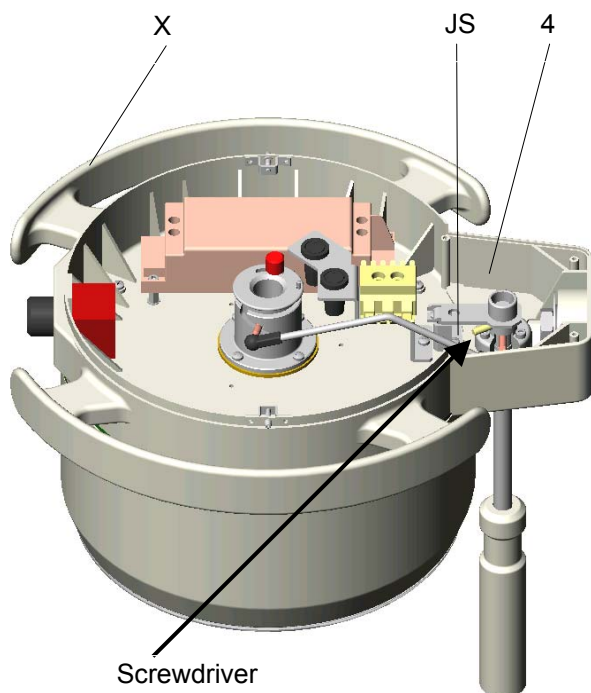


Stand for Mach 130 / 130F and Soloflex – design with short arm (Ø 22,8mm)

- Push the extension tube **AR** into the stand tube **SR** to the stop (I).
- Insert a screwdriver into the extension tube **AR** (II).
- Turn the screw inside the extension tube **AR** very carefully.
A slight turn of the screw may change the height adjustment.

♦ **Adjusting the spring arm
(new type stand)**

For adjusting the spring force proceed as described at the ceiling and wall attachment.



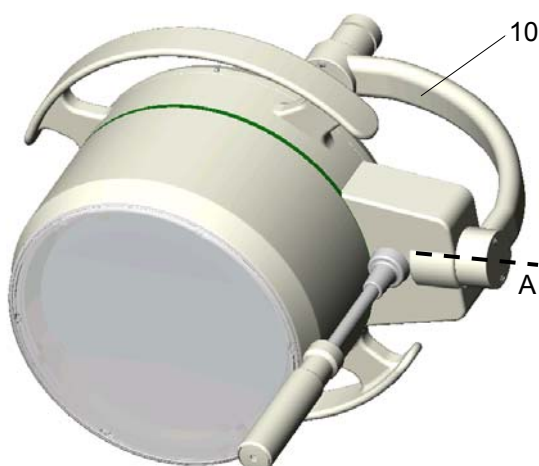
4.3 Adjustments at the lamp head

♦ Adjusting the movability of the handle for focusing (Mach 130F/130F 22,8V UL/ Uniflex R96 120V UL)

In case you notice that the handle moves too easily or too heavily, it may be necessary to adjust its movability.

To adjust the movability of the handle proceed as follows:

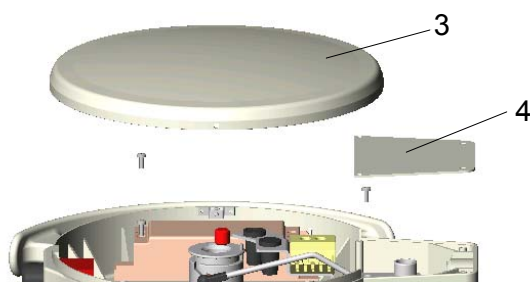
- Turn off the lamp.
- Loosen the housing cap arrest by pushing the arrest pin **X** (e.g. with a ball pen).
- Remove the cover **4** of the lamp.
- You can adjust the movability of the handle by turning the levelling screw **JS** with a screwdriver.
Clockwise - **stronger**
Anticlockwise - **easier**



♦ Manipulating the lamp

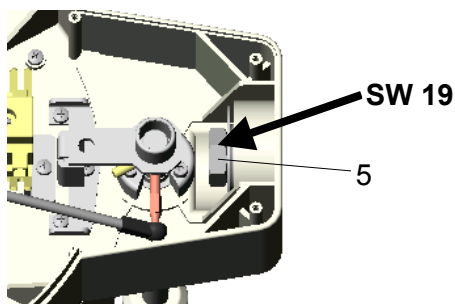
The lamp bow **10** enables a perfect movability and positioning of the lamps Mach 130F/130F 22,8V UL/ 130 and Uniflex R96 120V UL.

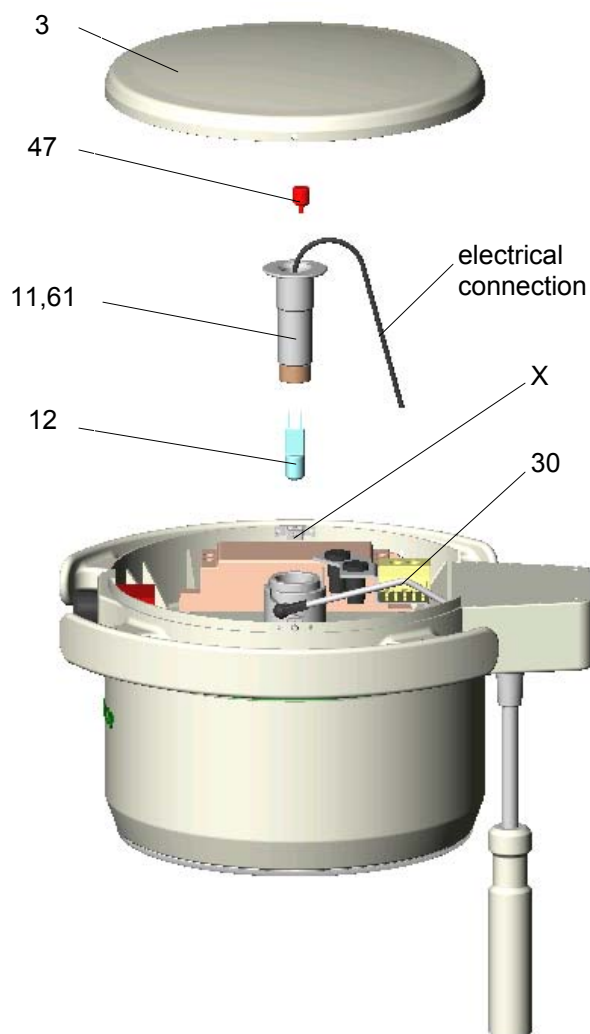
The brake force in the axis **A** is set. It is usually not necessary to adjust it.



In case it is necessary to adjust the brake force proceed as follows:

- Remove the upper housing part **3** of the lamp.
- Remove the trapezoid cover **4**.
- Tighten the nut **5** with a fork wrench (size across flats 19) as much as necessary.





4.4 Changing of spare parts

4.4.1 Changing the halogen bulbs

Dr. Mach uses special halogen bulbs as illuminants.

Only original Dr. Mach replacement bulbs may be used.

The use of other bulbs can lead to a considerable reduction of the light power and increase in the thermal load.

To change the bulbs proceed as follows:

- Turn off the lamp.
- Loosen the housing cap arrest by pushing the arrest pin **X** (e.g. with a ball pen).
- Tilt up the cap **3** and lift off from the facing arrest pin.
- Loosen holding screw **47** of lamp head.

Attention! If the bulb is changed immediately after operating the lamp, this screw may be hot.

- Pull out the lamp base **11/61** of its guide, without loosing the electrical connection.

Do not touch the halogen bulb with naked hands.

- Draw halogen bulb **12** (22,8-24V/50W) carefully from its socket.
- Put in the new halogen bulb.
- Mounting of the lamp base **11/61** and lamp housing cap in reverse order.

Remark:

The halogen bulbs have a service life of approx. **1000 hours** without any deterioration in their luminosity.

4.4.2 Changing the fuses

(Mach 130/130F 230V/120V and Uniflex R96 UL 120V)

The fuses in the lamp housing (models with built-in transformer only) prevent the transformer burning through in the event of a short circuit. The fuses are situated beneath the housing cap.

Visible type 5x20/0,63A/250V/T for 230 V
Visible type 5x20/1,25A/250V/T for 120/127 V
Visible type UR 5x20/1,25A/250V/T for Uniflex R96 UL120V

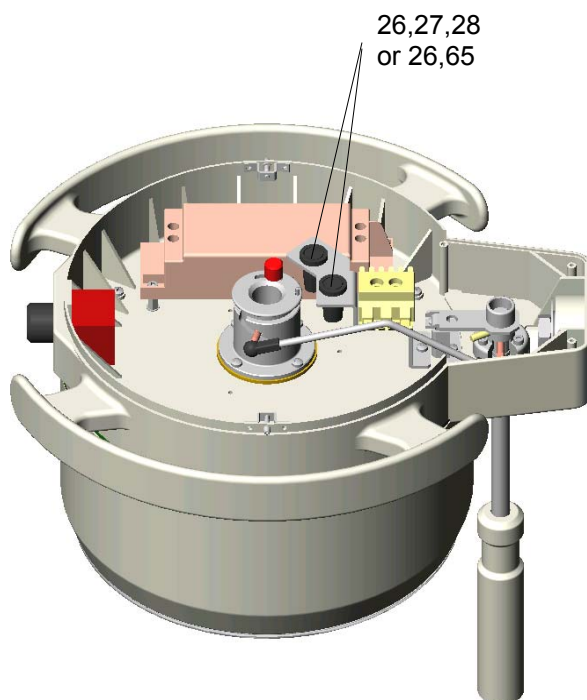
If the bulb is no longer on, check the bulb first, then the fuses.

To change the fuses, proceed as follows:

- Turn off the lamp.
- Loosing the housing cap arrest by pushing the arrest pin **X** (e.g. with a ball pen).
- Tilt up the cap **3** and lift off from the facing arrest pin.
- Turn the black fuse holder **26** $\frac{1}{4}$ of a rotation anti-clockwise with a screwdriver, change fuses **27/28**, **65**, insert fuse holder under slight pressure and rotate in a clockwise direction (bayonet catch).
- Replace the cap **3** in the same way as taking off, so that the arrest pins click into position.

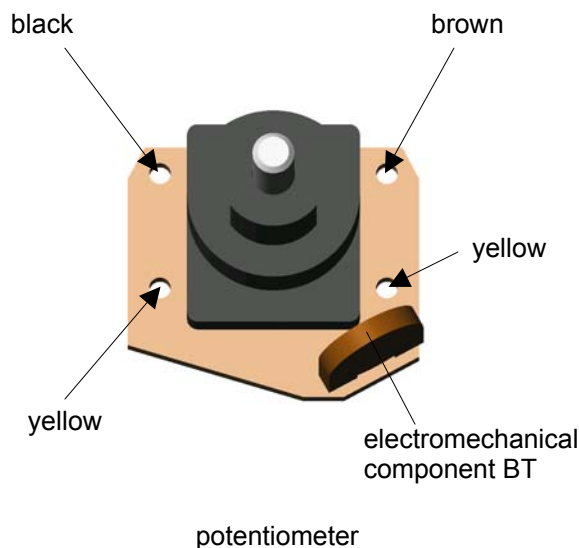
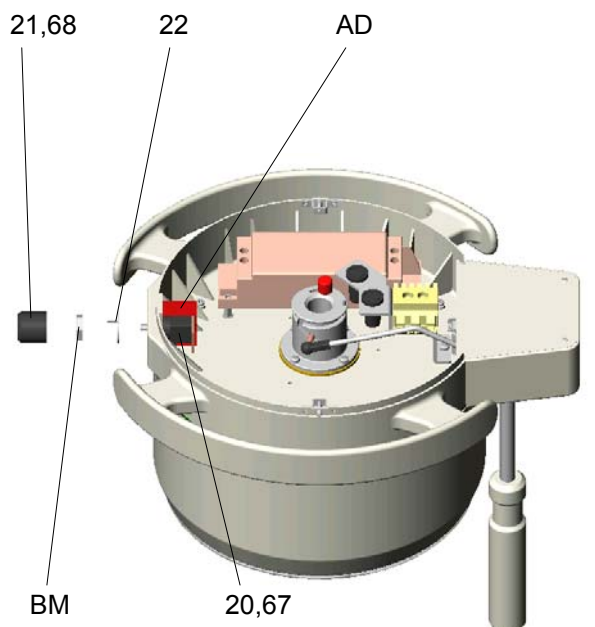
In the case of designs where the transformer is in the ceiling flange, external, or the lamp is connected to the 24V network, the necessary fuses are provided by the customer.

Pay attention to the instructions from the local installer.



4.4.3 Changing the ON/OFF switch (potentiometer)- Mach 130F/130, date of construction before oct. 2002

Exchange only by skilled electrician!!



You can turn the lamps Mach 130F/130 on and off using the push button switch **21/68**.

At designs with 230V and built-in electronic transformer, the push button switch **21/68** also features the function of light intensity control.

To change the ON/OFF switch (potentiometer) proceed as follows:

- Turn off the lamp.
- Loosen the push button **21/68**.
- Loosen the fixing nut **BM** and pull the potentiometer **20/67** and the metal disc **22** out of the lamp housing.
- Solder the cables off the potentiometer.

Mount the new ON/OFF switch **20/67**:

- Push the cables through and nick them.
- Solder the cables on the potentiometer as shown below.
- Insert the potentiometer in the cover **AD**. The lateral cover plates remain open.
- Mount the potentiometer including the cover **AD** in the lamp housing, so that the electromechanical component points to the lamp housing.
- Place the metal disc **22** on the lag area of the potentiometer, so that the stop pin is in the upper position.
- Fix the nut **BM** for approx. 2 thread lengths.
- Push the lateral cover plates of the cover **AD** between the lamp housing and the potentiometer.

The potentiometer must be completely covered (protection against electric shock).

The cables are on the downside of the cover.

- Fix the nut **BM**.
Attention! Do not overturn the thread!
- Turn the axis of the potentiometer clockwise to the endpoint (by hand).
- Mount the push button **21/68** and turn it clockwise to the endpoint (by hand).
- Push the button **21/68** to stop and fix the socket head cap screw.

Check the function of the lamp.

Figure 1

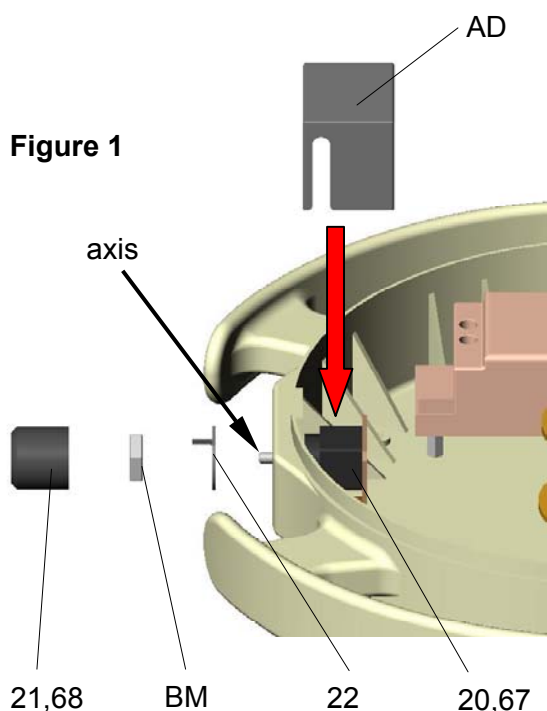


Figure 2

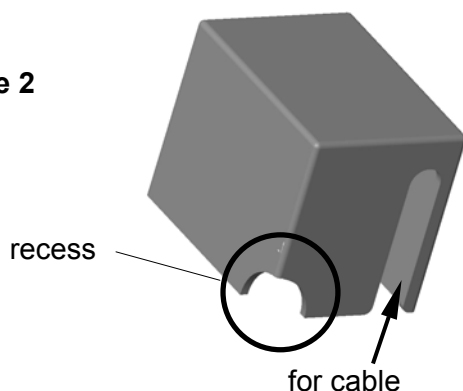
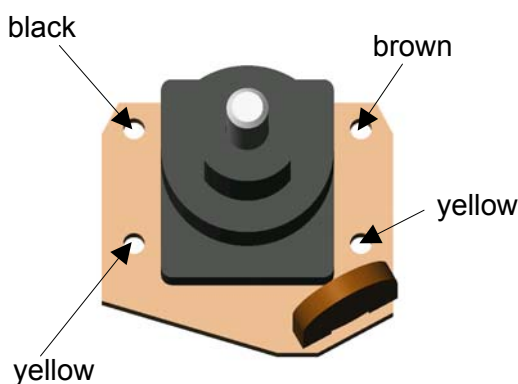


Figure 3



Potentiometer

4.4.4 Changing the ON/OFF switch (potentiometer)- Mach 130F/130, date of construction after oct. 2002

Exchange only by skilled electrician!!

You can turn the lamps Mach 130F/130 on and off using the push button switch **21/68**. At designs with 230V and built-in electronic transformer, the push button switch **21/68** also features the function of light intensity control.

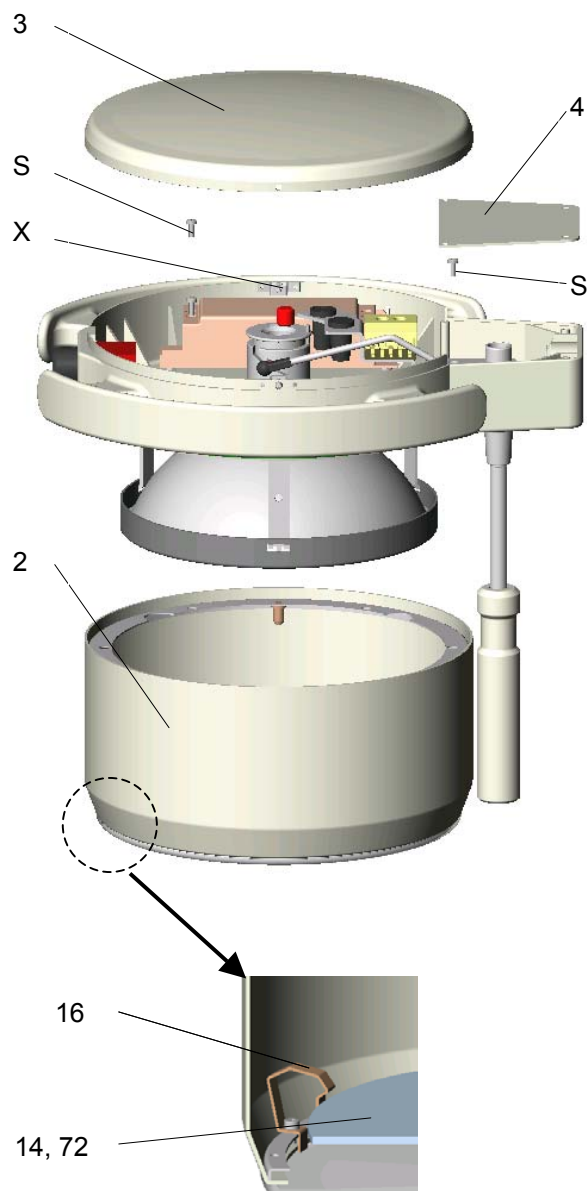
To change the ON/OFF switch (potentiometer) proceed as follows:

- Turn off the lamp.
- Loosen the push button **21/68**.
- Loosen the fixing nut **BM**, and pull the potentiometer **20/67** and the metal disc **22** out of the lamp housing.
- Solder the cables off the potentiometer.
- Solder the cables on the new ON/OFF switch (potentiometer) (see figure 3).
- Loosen the fixing nut **BM** from the new ON/OFF switch (potentiometer).
- Insert the new ON/OFF switch (potentiometer).
- **Attention! Do not pinch the cables!**
- Place the metal disc **22** on the lag area of the potentiometer, so that the stop pin is in the upper position.
- Fix the nut **BM** for approx. 1/2 thread lengths.
- Press the switch **20/67** to the inside of the lamp, until the cover **AD** can be mounted from above between lamp housing and switch (see figure 1).
- Lead the cables through the recess on the bottom side of the cover (see figure 2).

The ON/OFF switch is completely covered (protection against electric shock).

- Fix the nut **BM**.
- **Attention! Do not overturn the thread!**
- Turn the axis of the potentiometer clockwise to the endpoint (by hand).
- Mount the push button **21/68** until stop and fix the socket head cap screw.

Check the function of the lamp.



4.4.5 Changing the filter disk / conversion filter

The filter disk between reflector and protective disk (Mach 130F and Uniflex R96 UL only) prevents a damaging heating of the illuminated area.

ATTENTION!

The lamps may not be used without this filter.

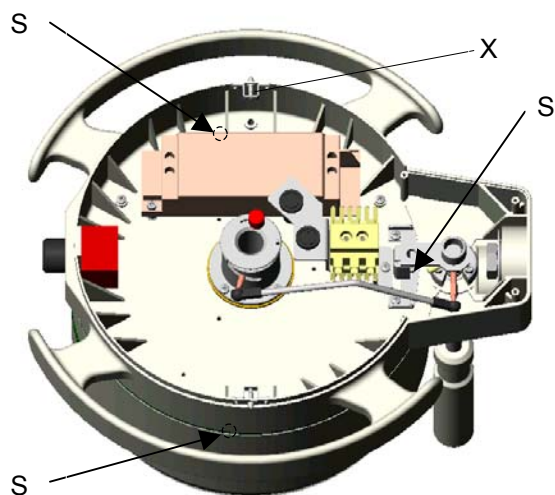
To change the filter disk **14** / conversion filter **72** proceed as follows:

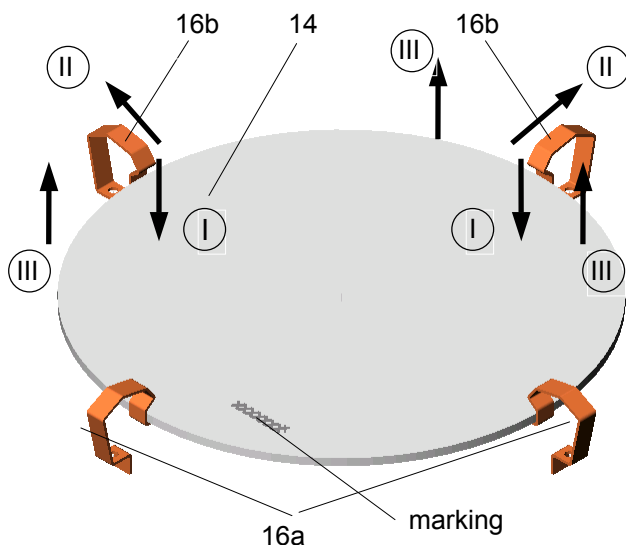
- **Turn off the lamp.**
- Loosen the housing cap arrest by pushing the arrest pin **X** (e.g. with a ball pen).
- Tilt up the cover **3** and lift off from the facing arrest pin.
- Remove cover **4**.
- Loosen the three screws **S** (position of the screws see topview below).

Attention: Hold the bottom part of the lamp housing carefully, it is loosen now.

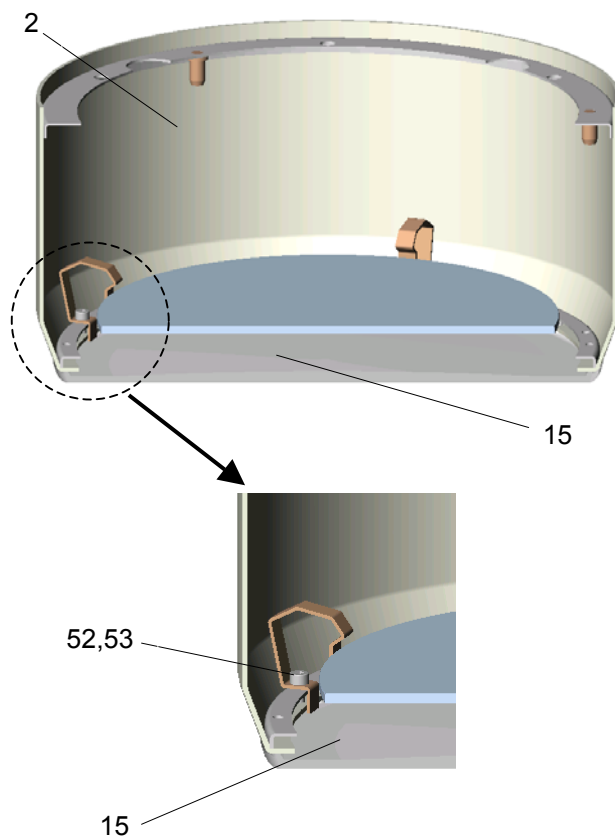
- Remove the bottom part **2** of the lamp housing.

You can see the filter disk **14** / the conversion filter **72** in front of you. It is kept by the four springs **16**.





- Press the filter disk **14** / the conversion filter **72** carefully against two springs **16a** (I).
Attention: Touch the filter disk only with a non-fluffy cloth.
- Press the springs **16b** to the edge (II) and lift the filter disk (III).
- Insert the new filter disk in reverse order. Make sure that the marking points to the upper side of the lamp housing as shown in the figure. The reverse side of the disk is steam finished.
Only use filter disks / conversion filters, that have been cleaned properly.
- Fix the bottom part **2** of the lamp housing with the three screws **S**.
- Fix the cover **3**, so that the two arrest pins snap in.



4.4.6 Changing the protective disk

In case you notice a impediment of the light quality because of a dull protective disk, it may be necessary to change the disk.

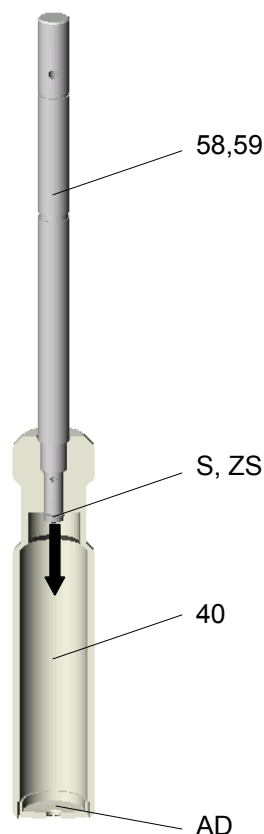
To change the protective disk proceed as follows:

- Turn off the lamp.
- Remove the bottom part **2** of the lamp housing as described at point 4.4.4.
- Loosen the six screws **52** and remove them including the washers **53**.
Attention: Hold the protective disk carefully, it is loosen now.
- Remove the protective disk **15**.
- Insert the new dispersion lens, so that it is placed even to the bottom part of the lamp housing.
- Fix the dispersion lens with the six screws **52** and the washers **53**.
Attention: Only use dispersion lenses, that have been cleaned accordingly.
- Fix the bottom part **2** of the lamp housing.
- Fix the cover **3**, so that the arrest pins snap in.

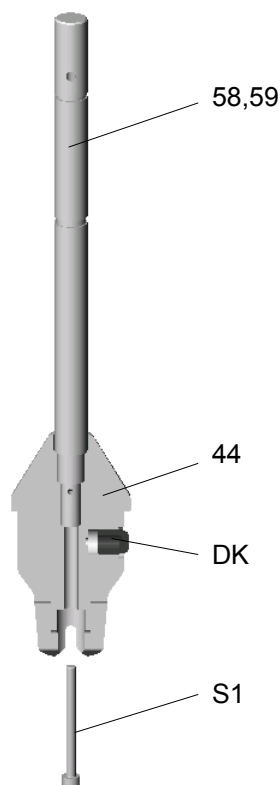
4.4.7 Conversion to sterilizable handle

Extent of supply:

- sterilizable handle sleeve
- couple
- 1 screw M4x35 DIN 912:A2 with with safety lake



- Turn off the lamp.
- Remove the standard handle **40**:
Remove the cover **AD** using a screwdriver.
Loosen the screw **S** M4x6 DIN 7985 with a cross screwdriver.
Remove the screw **S** M4x35 DIN 912:A2 and the lock washer **ZS** Ø4,3 DIN 6797.
Hold the handle **40**, while removing the screw and the lock washer, to ensure no damaging in the lamp housing.
Remove the handle **40**.





- Put couple **44** on the handle bar **58,59**.
- Fix the couple **44** with the screw **S1** M4x35 DIN 912:A2 with safety lake to the handle bar.
- Push the sterilizable handle sleeve on the couple **44**, so that it is secured by push-button **DK**.



5. Data

5.1 Technical data



Design with 230 Volt

~ Wechselstrom		Alternating current
Pr Primärseitig	230V / 0,29A	Primary side
Sek Sekundärseitig	22,8V / 2,19A	Secondary side
Leistungsaufnahme	50VA	Power consumption
Hz Hertz-Frequenz	50 / 60Hz	Frequency Hertz
 Sicherung	5x20/0,63A/250V AC/t	Fuse
 Schutzgrad	Type „B“	Class of protection


Design with 120 Volt

~ Wechselstrom		Alternating current
Pr Primärseitig	230V / 0,58A	Primary side
Sek Sekundärseitig	22,8V / 2,19A	Secondary side
Leistungsaufnahme	50VA	Power consumption
Hz Hertz-Frequenz	50 / 60Hz	Frequency Hertz
 Sicherung	5x20/1,25A/250V AC/t	Fuse
 Schutzgrad	Type „B“	Class of protection

Design with 120 Volt UL

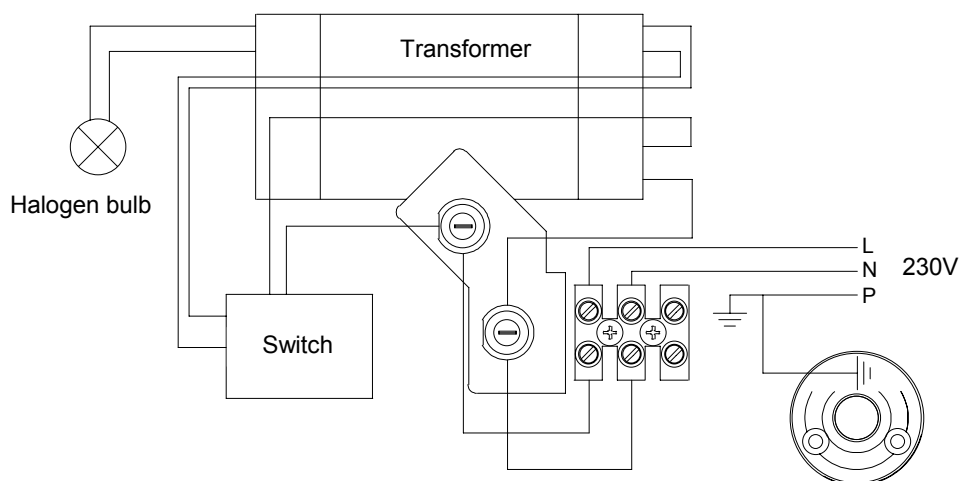
~ Wechselstrom		Alternating current
Pr Primärseitig	230V / 0,58A	Primary side
Sek Sekundärseitig	22,8V / 2,19A	Secondary side
Leistungsaufnahme	50VA	Power consumption
Hz Hertz-Frequenz	50 / 60Hz	Frequency Hertz
 Sicherung	UR 5x20/1,25A/250V AC/t	Fuse
 Schutzgrad	Type „B“	Class of protection

Design with 22,8 Volt (external transformer)

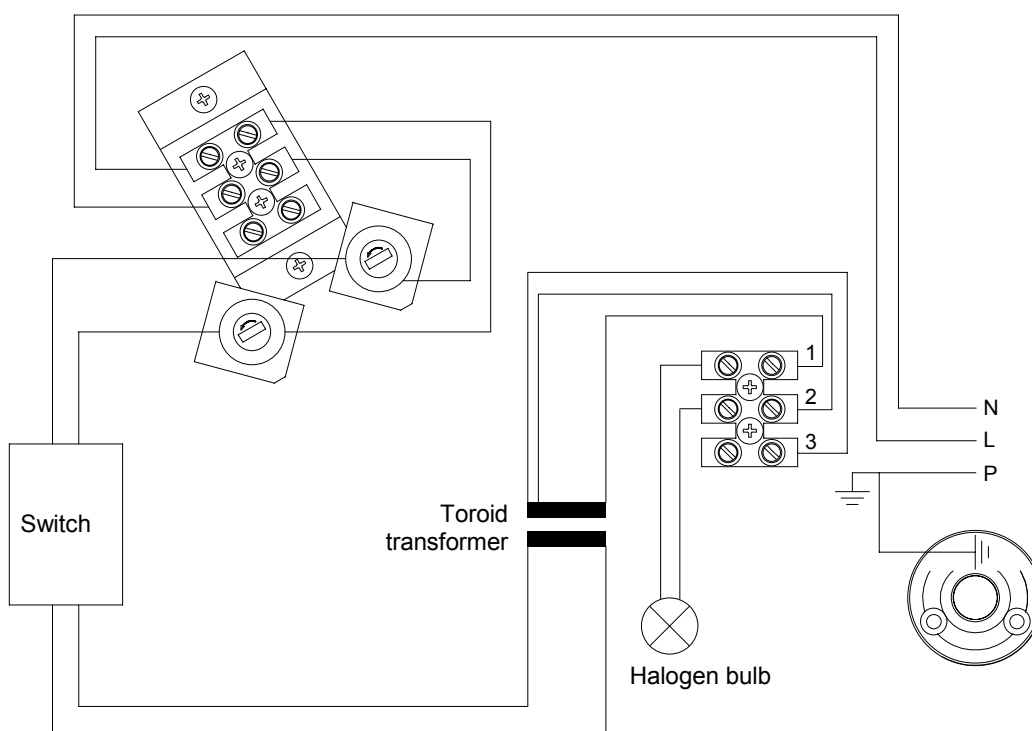
~ Wechselstrom		Alternating current
Nennspannung	22,8V	Rated voltage
Nennstrom	2,19A	Rated current
Hz Hertz-Frequenz	50 / 60Hz	Frequency Hertz
 Schutzgrad	Typ „B“	Class of protection

5.2 Wiring

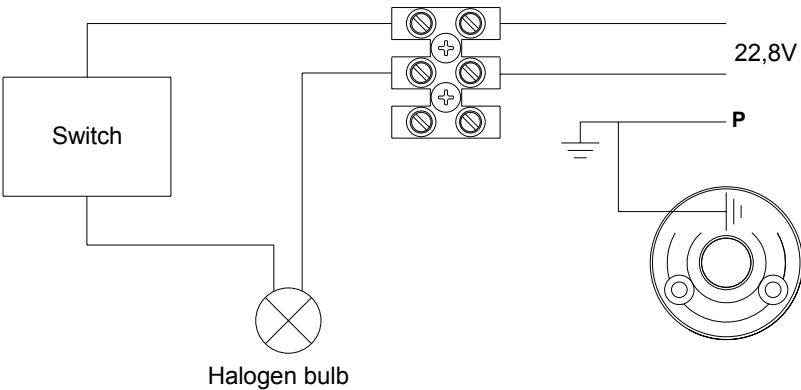
Mach 130F /130 design with 230V Built in electronic transformer



Mach 130F /130 and Uniflex R96 UL design with 120V Built in toroid transformer



Mach 130F / 130F UL / 130 design with 22,8V
External transformer



5.3 Environmental conditions

Operation

	Min.	Max.
Temperature	+10°C	+40°C
Relative atmospheric humidity	30%	75%
Air pressure	700 hPa	1060 hPa

Transport / Storage

	Min.	Max.
Temperature	-10°C	+50°C
Relative atmospheric humidity	20%	90%
Air pressure	700 hPa	1060 hPa

6. Characteristics



Protective conductor



Switch „ON / OFF“

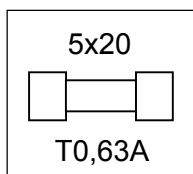
6.1 Specification of bulb

22,8V 50W
G 6,35
HALOGEN

Voltage, power
Socket
Mode of operation

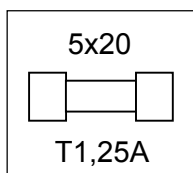
6.2 Specification of fuse

Design with 230 Volt



Visible fuse 5x20
Delay action 0,63A

Design with 120 Volt



Visible fuse 5x20
Delay action 1,25A

Design with 22,8 Volt

The lamps Mach 130F/ 130F 22,8V UL / 130 with external transformer do not have any fuses in the lamp housing.

6.3 CE-mark



The products Mach 130F/130 comply to the standards 93/42/EEC for medical products of the European Community's Council.

7. Disposal

The lamp does not contain any danger goods.

The components of the lamp should be properly disposed at the end of its shelf-life.

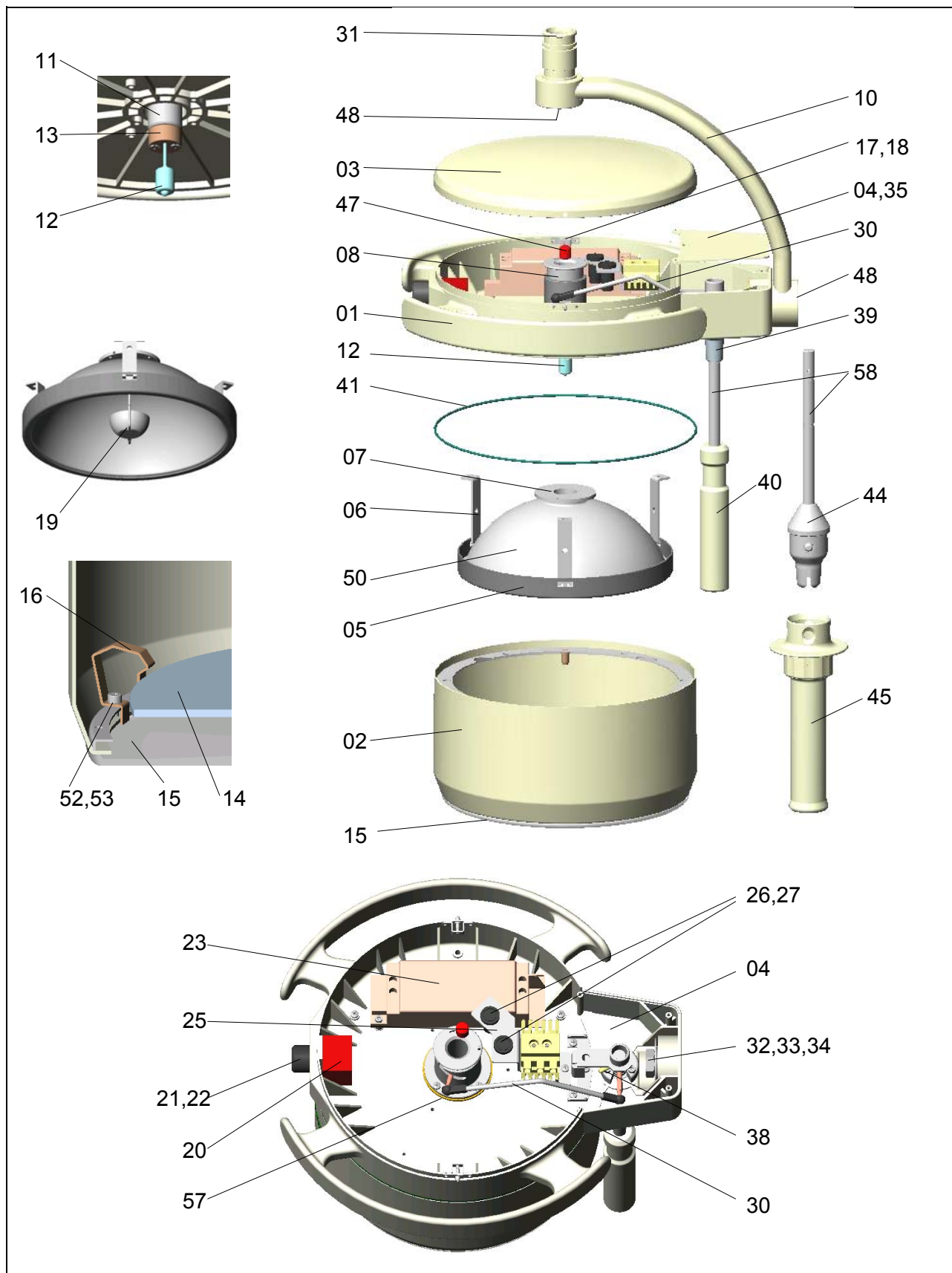
Make sure, that the materials are carefully separated.

For disposal proceed as follows:

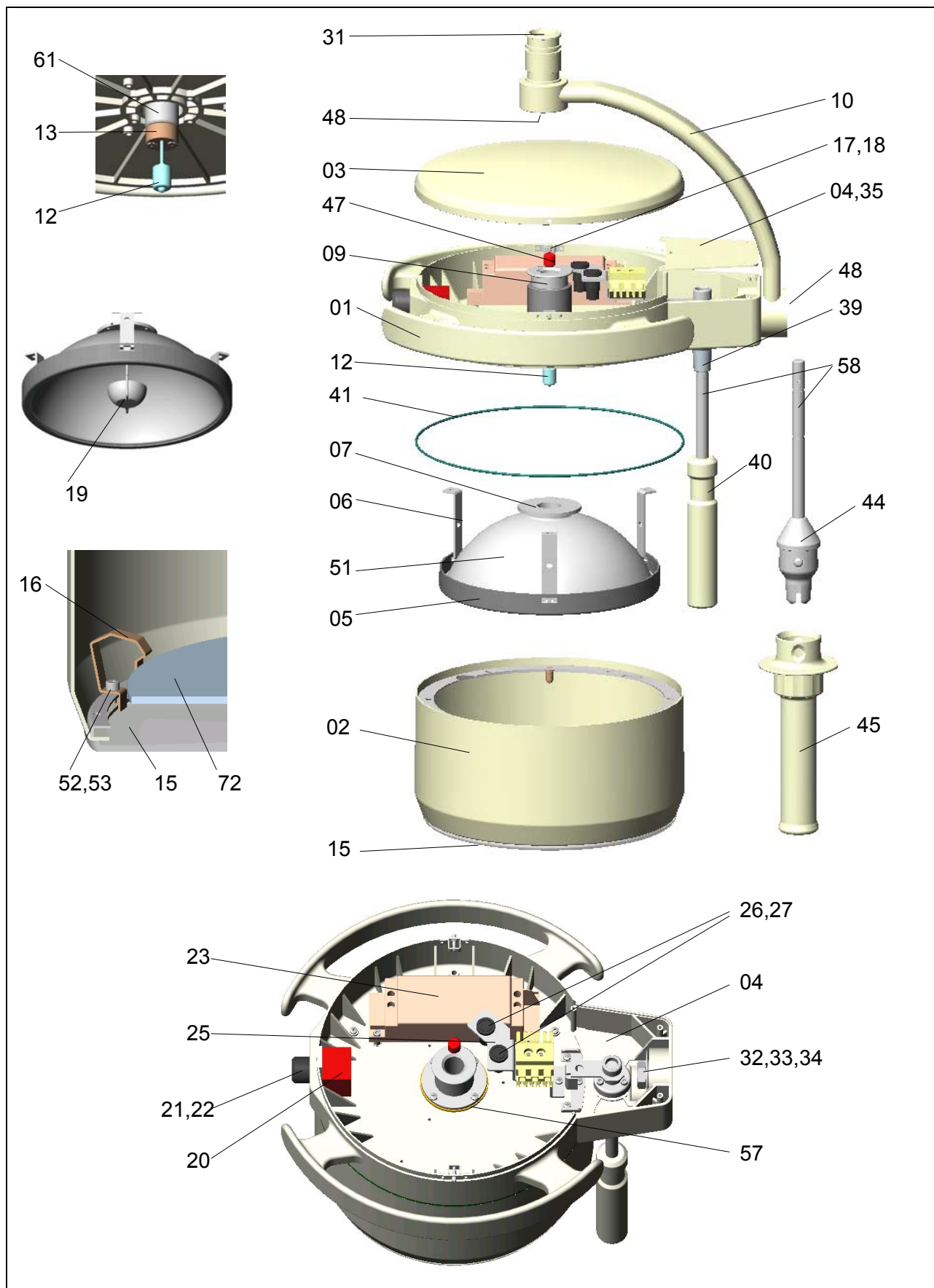
- The electrical conducting boards should be submitted to an appropriate recycling proceeding.
- The lamp housing should be submitted to thermal disposal.
- The rest of the components should be disposed according to the contained materials.

8. Spare parts

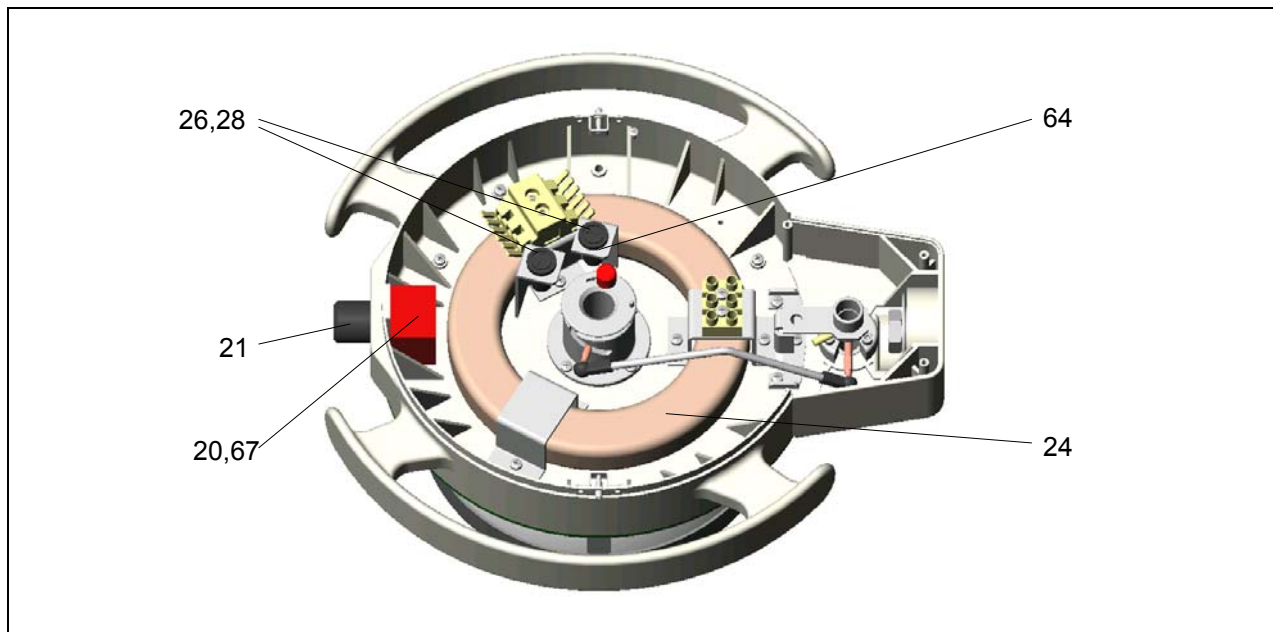
8.1 Mach 130F design with 230 Volt built in electronic transformer



**8.2 Mach 130 design with 230 Volt
built in electronic transformer**

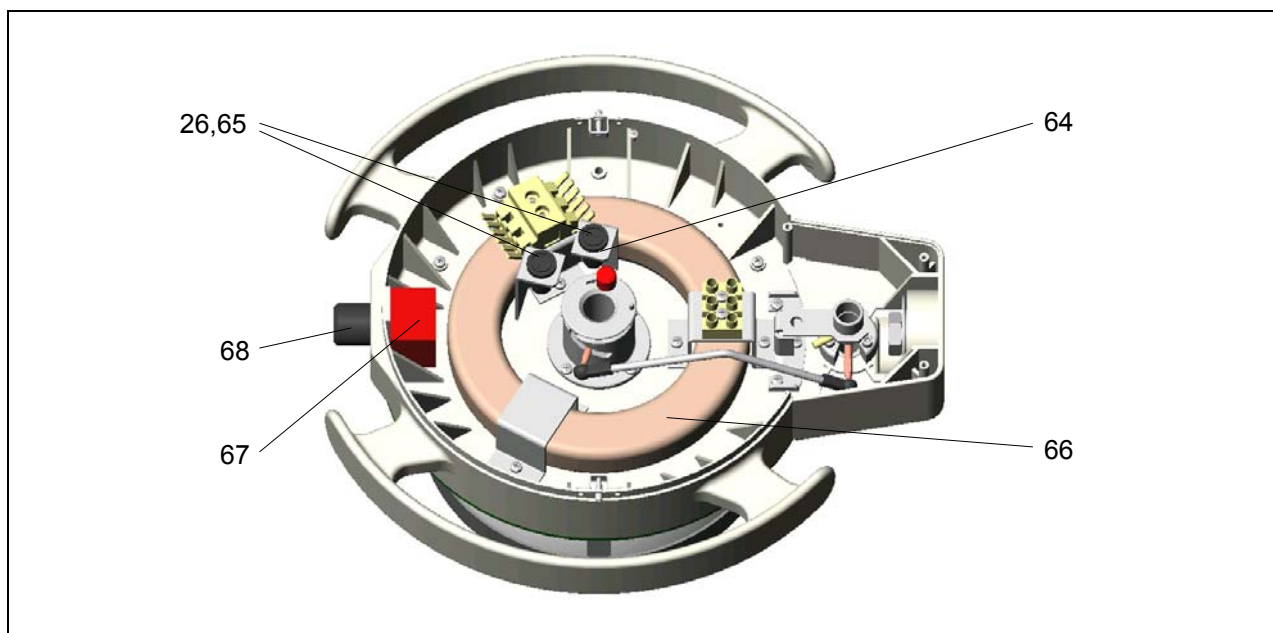


8.3 Mach 130F/130 design with 120 Volt -built in toroid transformer



Remark: For the rest of spare parts see lamp Mach 130F/130 –design with 230 Volt

8.4 Uniflex R96 UL 120 Volt -built in toroid transformer



Remark: For the rest of spare parts see lamp Mach 130F/130 –design with 230 Volt

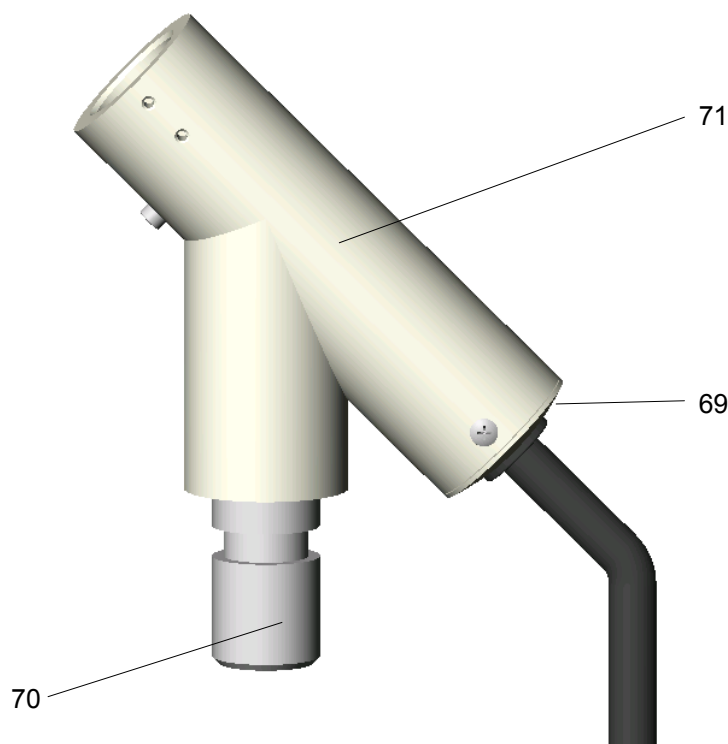
8.5 Mach 130F/130 design with 22,8 Volt -external transformer

Remark: For spare parts see lamp 130F/130 (design with 230V), excepting the electronic transformer, the fuses and the fuse holders.

8.6 Mach 130F UL design with 22,8 Volt -external transformer

Remark: For spare parts see lamp Uniflex R96 UL (design with 22,8V), excepting the toroid transformer, the fuses and the fuse holders.

8.7 Short arm (stand model)



8.8 New type stand

Remark: For spare parts see mounting instructions for new type stands.

8.9 Spare parts list

Item	Qty.	Name	EDVNO	Remarks
01	1	Base frame	10030201	
02	1	Housing lower part	10012005	no serigraph, ECO
			10012008	no serigraph, R96
			10012009	with serigraph, R96
			10012011	with serigraph, ECO
03	1	Cover of lamp housing	10011001	
04	1	Covering plate	10030216	
05	1	Retaining ring for reflector	10060202	
06	3	Clamping angle, complete	10061002	
07	1	Center sleeve for reflector	10061202	
08	1	Guiding tube for focus	10030202	
09	1	Guiding tube for fix-focus	10050210	
10	1	Lamp bow, complete	10100001	
11	1	Lamp holder focus	10050002	
12	1	Halogen bulb 22,8V/50W	67100201	
13	1	Lamp socket with cable	67320001	No. 32560
14	1	Dielectric filter disk	23250201	
15	1	Dispersion lens	21200201	
16	3	Retaining spring	10012202	
17	2	Arrest pin	10030205	
18	2	Pressure spring	10030212	
19	1	Shadower	10061003	
20	1	Switch (dimmer) with fixing nut	67340003	
21	1	Push button	10160201	
22	1	Stop pin for dimmer	10160204	
23	1	TRONIC transformer 50VA /prim. 230V AC /24V AC	67010401	
24	1	Toroid transformer 55VA /prim. 120V AC /24V AC	67010112	For Philips
25	1	Fuse base (TRONIC –transformer)	10030215	
26	2	Fuse holder	67370001	
27	2	Visible fuse 5x20/0,63A/250V/t	67370003	230V nom. V
28	2	Visible fuse 5x20/1,25A/250V/t	67370004	120/127V nom. V
29				
30	1	Adjusting lever for focusing	10050202	
31	1	Sliding contact (plug)	07102004	
32	1	Plate spring	65982006	
33	1	Washer	10030210	
34	1	Nut	67900002	
35				
36				
37				
38	1	Adjusting screw	65212010	
39	1	Insertion of handle	10030204	
40	1	Handle, standard	08030305	
41	1	Sealing ring turquoise, RAL 5018	21080206	
42				
43				
44	1	Couple for sterilizable handle sleeve	10152001	
45	1	Sterilizable handle sleeve	22150002	
46				
47	1	Arrest screw (red)	10050206	
48	2	Cover	07100201	
49				
50	1	Glass-reflector (Mach 130F)	28060235	

Spare parts list

Item	Qty.	Name	EDVNO	Remarks
51	1	Glass reflector (Mach 130)	67380101	
52	6	Head cap screw M2,5x8-A2, DIN912	65052077	
53	6	Washer A3,2 DIN125-A2	65512017	
54	6	Head cap screw M2,5x6-A2, DIN912	65052077	
55	6	Plate	21012203	
56				
57	1	Heat protector	10030218	
58	1	Handle bar focus	10013204	
59				
60				
61	1	Lamp holder fix-focus	10050004	
62				
63				
64	1	Fuse base (toroid transformer)	10030222	
65	2	Visible fuse UR 5x20/1,25A/250V AC/t	67370008	FSD 0034,3999
66	1	Toroid transformer (Uniflex R96 UL)	67010107	BV 385424
67	1	Switch with fixing nut (UR)	67340008	
68	1	Push button UR	67340010	
69	1	Cover	07103001	
70	1	Handle coupling	10160203	
71	1	Housing	07102005	
72	1	Conversion filter D175 Calflex Eco	67390203	